

Casey, were dropping from a large poplar tree on to a house in Sacramento and worming their way into the rooms through the cracks surrounding the screens, much to the annoyance of the owners. This weevil is rather uncommon in this state, having been found previously only at Sacramento and in the mountains of northern Trinity County.—Edwin C. Van Dyke.

NEW THYSANOPTERA BELONGING TO THE
GENUS *THRIPS* Linn.

BY DUDLEY MOULTON

This paper includes the description of nine new species and one new variety of the genus *Thrips* Linn., from various places in North America.

The genus may be defined by the following characters: Antenna with seven segments, forked sense cones on segments three and four. Maxillary palpus with three segments. Interocellar spines usually present although sometimes very small; a series of small spines behind each eye but without any one well defined postocular spine. Pronotum without spines at the anterior angles but with a pair at each posterior angle. Wings usually fully developed, with two longitudinal veins; anterior vein not regularly set with spines but the posterior vein has regularly placed spines over its entire length.

All types are in the author's collection.

Thrips dianthi Moulton, new species

Female holotype: Color uniformly light yellow including legs and wings. First antennal segment concolorous with head, segments II to VII almost uniformly brown, with II slightly darker and III somewhat lighter in basal half. Prominent body spines light brownish. Ocellar crescents light brown.

Total body length 1.17 mm.; head length .10 mm., width .15 mm.; length of fore wing .70 mm. Antennal segments, length (width) II, 33; III, 46 (16); IV, 43; V, 36; VI, 46; VII, 16 microns. Length of spines on posterior angles of prothorax 33; on ninth abdominal segment, outer, 93, inner 76; on tenth 83 microns. Fore vein of fore wing with 4-5 distal spines, hind vein with 13-15 spines. Comb on eighth abdominal segment complete.

This species is very similar to *Thrips tabaci* Lind. but easily separated by the one outstanding character, the series of five short stout spines of about equal length on either side along posterior margin of prothorax.

Type material: Female holotype taken on *Dianthus plumaris*,

June 3, 1927, by M. H. Ruhman. Type in author's collection. (Moulton No. 2047).

Type locality: Vernon, British Columbia.

Thrips mucidus Moulton, new species

Female holotype: Uniformly clear whitish yellow including legs and wings. First antennal segment whitish, II concolorous with head, III light grayish, IV to VII uniformly dark grayish brown. Ocellar crescents orange. Prominent body spines light brown.

Total body length 1.05 mm.; head, length .08 mm., width .133 mm. Antennal segments, length (width) III, 46 (20); IV, 40; V, 33; VI, 46; VII, 16 microns. Length of spines: on posterior angles of prothorax, outer 30, inner 33 microns; on ninth abdominal segment outer 86, inner 73; on tenth 83 microns. Length of fore wing .60 mm. Fore vein of fore wing with three distal spines, hind vein with 10-11 spines. Comb on eighth abdominal segment complete.

This species may be compared with *conferticornis* Priesner, also found in leaf mould but is easily separated by its much shorter terminal body spines.

Type material: Female holotype taken from apple leaf mould, July 3, 1929, by Leroy Childs. Type in author's collection, No. 3598.

Type locality: Hood River, Oregon.

Thrips gracilis Moulton, new species

Female holotype: Uniformly clear whitish yellow including legs, wings and first and second antennal segments; third segment likewise whitish yellow in basal half but slightly shaded with gray in outer half; IV and V lighter in basal half, light brownish gray in outer half, VI and VII gray brown. Ocellar crescents orange; body spines light yellowish brown.

Total body length 1.45 mm.; head, length .102 mm., width .147 mm. Antennal segments, length (width) II, 33 (23); III, 63 (16); IV, 50 (16); V, 43; VI, 56; VII, 20; total 294 microns. Length of spines: on posterior angles of prothorax outer 73, inner 83, on ninth abdominal segment outer, 150, inner 133, on tenth segment 130 microns. Length of fore wing .80 mm. Fore vein of fore wing with two distal spines, hind vein with 10 spines. Comb on eighth abdominal segment fully developed.

This species may be compared with *flavus* Schr. but separated by its more slender third antennal segment, being four times longer than wide while in *flavus* it is only three times longer, by the lesser number of spines on hind vein of fore wing, ten as

compared with 13-15 in *flavus*, and the two distal spines on fore vein as compared with three in *flavus*.

Type material: Female holotype and three female paratypes, taken on *Lathyrus venosus*, May 22, 1929 by R. M. White. Types in author's collection, No. 3726.

Type locality: Aweme, Manitoba, Canada.

Thrips gramineæ Moulton, new species

Female holotype: Color uniformly yellowish brown including all segments of antenna and legs, except tips of tibiæ and all tarsi which are brownish yellow. Wings uniformly light brownish yellow. Ocellar crescents orange, spines dark brown.

Total body length 1.04 mm.; head, length .106 mm., width .14 mm. Antennal segments, length (width) III, 43 (20); IV, 40; V, 36; VI, 46; VII, 16 microns. Spines on posterior angles of prothorax, outer 60, inner 66, on posterior angles of ninth abdominal segment 110, inner median 106, on tenth 110 microns.

Fore vein of fore wing with three distal spines, hind vein with 11-12 spines. Median spines on metanotum placed 10 microns from anterior margin and 10 microns apart. Comb on eighth abdominal segment fully developed, but more or less irregular.

This species has the general appearance of *fuscipennis* but is separated by the fully developed comb.

Type material: Female holotype taken on grass, May 1, 1928. Type in author's collection, No. 2729.

Type locality: Calaveras Valley, Alameda County, California.

Thrips lathyri Moulton, new species

Female holotype: Color head clear yellow, shaded in front and behind and darkened at the sides, thorax brownish yellow, abdomen brown; antennal segments I, II, V and VI dark brown with II lighter at tip, III yellow, slightly clouded at tip, IV and V yellow in basal half, brown distally; legs yellow with femora brownish; wings clear; Ocellar crescent orange; spines on prothorax clear yellow, those at tip of abdomen light brownish yellow.

Total body length 1.17 mm.; head length, .117 mm., width .138 mm. Antennal segments, length (width) III, 50 (20); IV, 43; V, 36; VI, 50; VII, 16 microns. Spines on posterior angles of prothorax, outer 23, inner 26-30 microns; on posterior angles of ninth abdominal segment 70, inner median 50, on tenth segment 76 microns.

Back of head without transverse striations; posterior margin of prothorax with four spines on each side inward from angle spines. Comb on eighth abdominal segment wanting; median spines on

metanotum placed 13 microns from anterior margin and 12 microns apart; fore vein of fore wing with three distal spines, hind vein with 12-13 spines.

This species is closely related to *discolor* Hal. but separated by its more uniform color and shorter thoracic spines.

Type material: Female holotype taken on *Lathyrus* sp., May 14, 1926 (G. W. Goldsmith). Type in author's collection, No. 1161.

Type locality: Colorado Springs, Colorado.

Thrips anemonensis Moulton, new species

Female holotype: Color blackish brown; antennal segments I, II, V, VII dark brown, III brownish yellow, IV somewhat darker; all femora and middle and hind tibiae, except at tips, blackish brown, fore tibiae and all tarsi light yellowish brown; wings light brown, lighter in basal quarter, body spines blackish brown.

Total body length 1.4 mm.; head, length .10 mm.; width .15 mm. Antennal segments, length (width) III, 53 (23); IV, 46 (20); V, 36; VI, 50; VII 20 microns. Spines on posterior angles of prothorax, outer 73, inner 76, on posterior angles of ninth abdominal segment 133, median dorsal 106, on tenth segment 116 microns.

Posterior margin of prothorax with fore spines on either side inside of the angle spines; median spines on metanotum placed rather close to anterior margin, 7-10 microns and 23 microns apart. Comb on eighth abdominal segment wanting in the middle. Fore vein of fore wing with three distal spines hind vein with eleven spines.

This species has the general appearance of *magnus* Moulton but is separated by the lighter third and fourth antennal segments and the position of the metanotal spines which are much closer to the anterior margin, also by the eight spines on posterior margin of prothorax. These two latter characters also serve to separate it from *madronei* Moulton.

Type material: Female holotype taken on *Anemone patens*, May 11, 1928 (A. B. Bird). Type in author's collection, No. 3029.

Type locality: Birtle, Manitoba, Canada.

Thrips frosti Moulton, new species

Female holotype: Deep brown, head and thorax lighter, mostly orange yellow clouded with brown and darkened especially at the sides; thorax also with areas of red pigment; antennal segments I, II, VI and VII dark brown, III-V clear yellow except tip of V which is rather abruptly brown; legs brown with most of fore

tibiæ and tips of middle and hind tibiæ, also all tarsi, clear yellow; wings uniformly brown; ocellar crescents orange-red; body spines dark brown.

Total body length 1.1 mm.; head, length, .113 mm., width .133 mm. Antennal segments, length (width) III, 43 (20); IV, 40; V, 33; VI, 50; VII, 16 microns. Spines on posterior angles of prothorax, outer 66, inner 70; on posterior angles of ninth abdominal segment, 110, inner median 90, on tenth 100 microns.

Back of head with distinct transverse striations; posterior margin of prothorax with three spines on each side inward from angle spines, the innermost pair strong and fully twice longer than the others; median spines on metanotum placed about thirteen microns from anterior margin and thirteen microns apart. Comb on eighth abdominal segment complete. Fore vein of fore wing with 3-4 distal spines; hind vein with 10-11 spines. This species may be separated from *fuscus*, to which it is most closely related, by the clear yellow tarsi and tips of all tibiæ, and the clear yellow fourth antennal segments, which are clouded brownish in *fuscus*.

The male allotype is colored as in the female but somewhat lighter and the wings are clearer near the base. The clear oval areas on abdominal tergites two to six are small and oval, the first 30 and the last 23 microns in width.

Type material: Female holotype, male allotype, one male and four female paratypes, taken by sweeping, August 17, 1929 (C. A. Frost). Types in author's collection, No. 3787.

Type locality: Sherborn, Massachusetts.

Thrips fuscus Moulton, new species

Female holotype: Color uniformly deep brown including legs except fore tibiæ and all tarsi which are yellowish brown; antennal segments I, II, VI and VII deep brown, III and IV mostly yellow but clouded brownish, IV somewhat darker than III, V mostly brown but lighter in basal third; wings uniformly brown; body spines dark brown.

Total body length: 1.33 mm.; head, length .123 mm., width .17 mm. Antennal segments, length (width) III, 50 (23); IV, 46; V, 33; VI, 46; VII, 20 microns. Spines on posterior angles of prothorax, outer 70 inner 80, on posterior angles of ninth abdominal segment 133, inner median 120, on tenth segment 103 microns.

Head slightly broadened behind, cheeks almost straight; posterior margin of prothorax usually with three spines on either side inside of angle spines; median spines on metanotum placed close to anterior margin and 23 microns apart. Comb on eighth abdominal segment broken in the middle. Fore vein of fore wing with three distal spines, hind vein with 12-13.

The male allotype is colored almost like the female. The transparent areas on sternites are very small, about ten microns in width and more round than oval.

This species may be separated from *frosti* by the uniformly brown middle and hind tibiae and in the male by the small roundish transparent areas on the sternites, which are much smaller and not oval as in *frosti*.

Type material: Female holotype, male allotype, one male and two female paratypes, Idaho.

Thrips herricki var. *impatientis* Moulton, new variety

Female holotype: Colored as in the species.

Total body length 1.25 mm.; head, length .113 mm., width .15 mm. Antennal segments, length (width) III, 53 (18); IV, 50; V, 40; VI, 56; VII, 16 microns. Spines on posterior angles of prothorax, outer, 73, inner, 90, on posterior angles of ninth abdominal segment 116, inner median 86, on tenth segment 103 microns.

Spines on metanotum placed 10-13 microns from anterior margin and 16-20 microns apart. Comb on eighth abdominal segment complete; Fore vein of fore wing with three distal spines, hind vein with 10-12 spines.

This variety is separated from the species by the shorter third antennal segment, 53 as compared with 60 microns, the shorter spines on posterior angles of prothorax, 73-80 as compared with 90-96, and the shorter spines at tip of abdomen.

Type material: Female holotype and two female paratypes taken on Jewel Weed, September 3, 1927 (L. Blevins) at Atwater Ill. (No. 2315) and one paratype, taken by sweeping August 17, 1929 (C. A. Frost) at Sherborn, Massachusetts (No. 3787).

Thrips taraxaci Moulton, new species

Female holotype: Color blackish brown including all femora, middle and hind tibiae and first two antennal segments, third antennal segment brownish yellow, IV somewhat darker, V to VII dark brown; fore tibiae and all tarsi brownish yellow; wings uniformly brown; ocellar crescents deep orange; body spines dark brown.

Total body length 1.27 mm., head length .106 mm., width .16 mm. Antennal segments, length (width) III, 46 (21); IV, 46; V, 36; VI, 53; VII, 16 microns. Spines on posterior angles of prothorax, outer 76, inner 76, on posterior angles of ninth abdominal segment 140, median dorsal 133, on tenth segment 133 microns.

Head 1.5 wider than long; transverse striations on back of

head distinct. Posterior margin of prothorax with three spines on either side, inside from angle spines; median spines on metanotum placed near anterior margin, only 10 microns away but 20 microns apart. Comb on eighth abdominal segment complete but sparse and irregular. Fore vein of fore wing with three distal spines, hind vein with 14-15 spines.

This species is separated from *magnus* Moulton by its smaller size, shorter third antennal segment and the complete comb on eighth abdominal segment.

Male allotype is colored as in female but all antennal segments are noticeably lighter. The light colored depressions on sternites two to six are large and transverse, the first 73 by 20 microns, and the last is only slightly smaller.

Type material: Female holotype, male allotype, and two female paratypes taken on yellow dandelion, June 12, 1932. Types in author's collection, Nos. 4917 and 1521.

Type locality: Bozeman, Montana. One paratype from Mid-day Valley, British Columbia. (N. L. Cutler).

A NOTE ON THE OCCURRENCE OF *HESPERORHIPIS ALBOFASCIATUS* FALL (Buprestidæ)

The minute and interesting buprestid *Hesperorhipis albofasciatus* was described by Dr. Fall¹ from a unique example beaten from mistletoe at Fort Tejon, California, by Mr. A. C. Davis. Although Mr. Davis made repeated attempts to obtain additional specimens and others, including the writer, have sought for the species at the type locality, to the best of my knowledge it has not been taken since. It therefore seems of interest to record a second specimen of this remarkable species which was captured by Mr. P. J. Timberlake, of the Citrus Experiment Station at Riverside. Mr. Timberlake's example was taken on the Mt. Baldy Trail, near Camp Baldy, in Los Angeles Co., Calif., at an altitude of approximately 4700 feet, August 23, 1920. The beetle was beaten from *Ceanothus*, which may well be its host plant and which might account for the fact that it has not been taken again on mistletoe.—E. Gorton Linsley.

¹ Fall, H. C., 1930, *Pan-Pacific Entomologist* 7:75.